

FEDERAL PUBLIC SERVICE COMMISSION
(Curriculum & Research Wing)

Schemes and Syllabi for Screening/Professional Tests as well as Descriptive Examination
Relating to Posts Advertised under Consolidated Advertisement No. 02/2022

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
1.	25/2022	Data Control Assistant (BS-16), Cabinet Secretariat, Establishment Division.	Second Class or Grade 'C' Bachelor's degree in Computer Science or Information Technology or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Grammar Usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Arithmetic Logical Unit, Memory (RAM, ROM) Types of RAM, Ports, etc. • Input and Output Devices, • Use of Microsoft Office (MS Word, MS Excel only) • Application and System Software, • Electronic Data Processing • Management Information System • Storage and Multimedia, • Network & Security Issues, • Relational Database Management System (RDBMS),
2.	26/2022	Welfare Officer (BS-16), Staff Welfare Organization, Establishment Division.	i. Bachelor's degree in Sociology/ Social Work / Home Economics. ii. Three (3) years post qualification experience in the field of Welfare work, relaxable in the case of holders of Master's degree in Sociology / Social Work/ Anthropology / Home Economics.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Grammar Usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Community Organization and Development, • Social Research & Statistics, • Organizational Behaviour and Human Resources, • Social Welfare Policy and Administration, • Methods of Counselling & Guidance Services • Project Preparation and Financial Planning • Monitoring Methodology, Evaluation, Cost-benefit Analysis and Implementation

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
3.	27/2022	Assistant Director (BS-17), Chief Commissioner's Office, ICT, Ministry of Interior.	Second Class or Grade 'C' Master's degree in Public Administration/ Economics from a University recognized by HEC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Vocabulary, Grammar Usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Rules of Business, 1973 as amended. • Secretariat Instructions. • Civil Servants Act 1973 and Rules made thereunder • Civil Servants (Appointment, Promotion and Transfer) Rules, 1973 • Government Servants Conduct Rules, 1964 • Functions of Human Resource Management • Public Procurement Rules, 2004 • Administration Ethics
4.	28/2022	Research Officer (BS-17), Ministry of Maritime Affairs.	Second Class or Grade 'C' Master's degree in Economics / Project Management / Statistics / Mathematics / Computer Science / MBA Finance / Public Administration or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) Part-I English =20 marks Part-II General Intelligence/ Professional Test=80 Marks	Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> • Basic Arithmetic <ul style="list-style-type: none"> – Algebra – Ratios – Percentages – Arithmetic Means • Current Affairs. <ul style="list-style-type: none"> – Issues/Challenges at National/International Level during the last 2 years • Pakistan Affairs & Islamic Studies <ul style="list-style-type: none"> – Basic Level knowledge • Research Techniques/Methodologies • Functions of Ministry of Maritime
5.	29/2022	Assistant Director (BS-17), Anti Narcotics Force, Ministry of Narcotics Control.	Second Class or Grade 'C' Master's degree or degree in Law or equivalent qualification recognized by HEC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Vocabulary, Grammar Usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Potential hazards of drugs for general public, • Control of Narcotics Substances Act, 1997 • Anti Narcotics Force Act, 1997 • Public Policy Planning and Implementation • System of Financial Control and Budgeting • Functions of Human Resource Management • Administrative Ethics

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
6.	31/2022	Lecturer (Male) (BS-17), (A) Botany (B) Business Administration (C) Computer Science (D) Economics (E) English (F) Islamic Studies (G) Mathematics (H) Political Science (I) Psychology (J) Sociology (K) Urdu Directorate of Federal Government Educational Institution (Cantts/ Garrisons), Ministry of Defence.	Second Class or Grade 'C' Master's degree or equivalent qualification in the relevant subject.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Subject Test = 50 marks Part-III Professional Test = 30 marks Note: <ul style="list-style-type: none"> ▪ In Language Subjects (i.e Urdu and English), English part for 20 marks will not be included. There will be 70% subject Test and 30% Professional Test. 	A. For Botany Part-I Vocabulary, Grammar Usage, Sentence Structuring. Part-II (Masters Level) <ul style="list-style-type: none"> • Algae, • Fungi, • Bryophytes • Gymnosperms, • Angiosperms, • Plant Physiology, • Ecology, • Cytology, • Genetics, Part-III <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation B. For Business Administration Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II (Masters Level) <ul style="list-style-type: none"> • Business Finance • Principles of Management • Business Law • Business Research Methods • Financial Management • Marketing Management • Production/Operation Management • Management Information System Part-III <ul style="list-style-type: none"> • Teaching Techniques and Methodology, • Classroom Management and Discipline, • Testing and Evaluation,

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>C. <u>For Computer Science</u></p> <p><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Computer Hardware/Software, • Data Communication & Networking, • C/C++ Language, • Visual Basic, • Operating System Unix/Linux • Windows XP, 2000, • Oracle/PLSQL, • System Analysis & Design. • Web Programming, <p><u>Part-III</u></p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology, • Classroom Management and Discipline, • Testing and Evaluation, <hr/> <p>D. <u>For Economics</u></p> <p><u>Part-I</u> Vocabulary, Grammar Usage, Sentence Structuring.</p> <p><u>Part-II (Masters Level)</u></p> <ul style="list-style-type: none"> • Micro Economics: Meaning, Scarcity and Opportunity Cost. • Goals of Microeconomics Policy: Efficiency & equity • Macro Economics: Basic Economic Concepts • The theory of Factor Pricing • Monetary Theory & Public Finance, • Industrial Development in Pakistan • Interest Free Banking in Pakistan • Basic Statistics on Economy of Pakistan <p><u>Part-III</u></p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>E. For English</p> <p>Part-I (Master's Level) (70 Marks)</p> <ul style="list-style-type: none"> • Vocabulary • Structuring of sentences. • Linguistics. • Grammar. • Syntax. • Diction. • Drama: Shakespeare (Hamlet; King Lear; Twelfth Night), William Congreve (The Way of the World), Shaw (Pygmalion; Heartbreak House), Harold Pinter (The Caretaker), Samuel Beckett (Waiting for Godot), Eugene O'Neill (Long Day's Journey into Night) <p>Part-II (30 Marks)</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology, • Classroom Management and Discipline, • Testing and Evaluation, <p>F. For Islamic Studies</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <p>قرآن کا بنیادی موضوع / متن ☆ سیرت النبی ﷺ ☆ فقہ: جامعیت، اختلاف رائے اور عصر حاضر کے تناظر میں مذہب کی تشریح۔ ☆ تعارف اسلام ☆ انسانی زندگی میں دین کی اہمیت ☆ اسلام کے نمایاں پہلو ☆ اسلامی عقائد کے انفرادی اور اجتماعی اثرات ☆ انسانی حقوق۔ اسلام کی نظر میں ☆ اسلام اور عصر حاضر کے چیلنجز ☆ اسلامی نظام حکمرانی کا ڈھانچہ ☆ سرکاری ملازمین کی ذمہ داریاں ☆ اسلامی ضابطہ حیات ☆</p> <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>G. For Mathematics</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Calculus/Differentiation, Integration, Limits of continuity • General Theorems (Rolle's Theorem, Mean Value Theorem) • Areas and Volumes, centre of Mass • Computing Tools for Mathematicians, • Mathematical Statistics, • Mathematical Spaces (Sets, Vector Spaces, Metric Spaces, topological spaces Tensors, • Differential Equations. <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation <hr/> <p>H. For Political Science</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring.</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Western Political Thought (Plato, Aristotle, Machiavelli, Montesquieu, Hobbes, Locke, Rousseau, Marx, Lenin, Frances Fukuyama) • Muslim Political Thought (Al-Farabi, Al-Mawardi, Imam Ghazali, Ibn Khaldun, Shah Waliullah, Allama Muhammad Iqbal) • State System: Nature and Emergence, Islamic Concept • Political Institutions and Role of Government • Basic concepts of Political Ideologies (Capitalism, Marxism, Communism/Socialism, Fascims, Nationalism, Islamic Political Ideology) • Government and Politics in Pakistan: Analysis of 1956, 1962, 1973 Constitutions and Constitutional Amendments • Comparative Study of Political System (Turkey, India, Malaysia and China) <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>I. For Psychology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Nature and Scope of Psychology • Developmental Psychology • Social Psychology • Educational Psychology • Counselling Psychology • Abnormal and Clinical Psychology • Organizational/Industrial Psychology • Forensic Psychology • Psychological Testing and Assessment • Research Methodology <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology • Classroom Management and Discipline • Testing and Evaluation <hr/> <p>J. For Sociology</p> <p>Part-I Vocabulary, Grammar Usage, Sentence Structuring</p> <p>Part-II (Masters Level)</p> <ul style="list-style-type: none"> • Meaning and Elements of Culture • Society: Meaning and Characteristics • Social Contract Theory & Organismic Theory • Sociological Theories (Ibn-i-Khaldun, Spencer, Max Weber, Karl Marx) • Methods of Sociological Research, • Social Institutions: Nature, Genesis & Function • Mechanism of Social Control: Formal & Informal • Social and Cultural Change & Social Policy: Processes & Effects • Social Problems in Pakistan <p>Part-III</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology, • Classroom Management and Discipline, • Testing and Evaluation,

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
					<p>K. For Urdu Part-I (Master's Level) (70 Marks)</p> <p style="text-align: right;"> اردو ذخیرہ الفاظ ☆ اردو سہلے کا ڈھانچہ ☆ اردو قواعد کا استعمال ☆ غالبیات ☆ اقبالیات ☆ مسدس حالی ☆ میر تقی میر کی شاعری ☆ طنز و مزاح: مشتاق احمد یوسفی کی نظر میں ☆ </p> <p>Part-II (30 Marks)</p> <ul style="list-style-type: none"> • Teaching Techniques and Methodology, • Classroom Management and Discipline, • Testing and Evaluation,
7.	33/2022	Sub-Engineer (Civil) (BS-16), Office of Chief Engineering Adviser/ Chairman Federal Flood Commission, Ministry of Water Resources.	<p>i. Three (3) years Diploma of Associate Engineer in Civil from a Government Polytechnic or any recognized Institution.</p> <p>ii. Five (5) years post qualification experience in Irrigation or Flood Works.</p>	<p>Objective Type Test (MCQ)</p> <p>Part-I English = 20 marks</p> <p>Part-II Professional Test=80 marks</p>	<p>Part-I Grammar Usage, Sentence Structuring</p> <p>Part-II</p> <ul style="list-style-type: none"> • Foundations: Design and Construction • Design of Simple Steel Structures • Building materials: Properties & Uses • Irrigation • Drainage and Sewerage • Estimation & Quantities • Road & Highways • Bridges and Culverts • Electrical Services

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
8.	36/2022	Assistant Director (BS-17), Federal Public Service Commission.	Second Class or Grade 'C' Master's Degree or equivalent qualification from a University recognized by HEC.	Objective Type Test (MCQ) Part-I English =20 marks Part-II General Intelligence/ Professional Test=80 Marks	Part-I Vocabulary, Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> • Basic Arithmetic <ul style="list-style-type: none"> – Algebra – Ratios – Percentages – Arithmetic Means • Current Affairs. <ul style="list-style-type: none"> – Issues/Challenges at National and International Level during the last 2 years • Pakistan Affairs & Islamic Studies <ul style="list-style-type: none"> – Basic Level knowledge • Basic IT knowledge. • FPSC Ordinance 1977
9.	37/2022	Data Processing Assistant (BS-16), Federal Public Service Commission.	Second Class or Grade 'C' Bachelor's Degree in Computer Science or Information Technology or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Grammar Usage, Sentence Structuring Part-II <ul style="list-style-type: none"> • Arithmetic Logical Unit, Memory (RAM, ROM) Types of RAM, Ports, etc. • Input and Output Devices, • Use of Microsoft Office (MS Word, MS Excel only) • Application and System Software, • Electronic Data Processing • Management Information System • Storage and Multimedia, • Network & Security Issues, • Relational Database Management System (RDBMS),

S. No	Case No. F.4-	Particulars of Post(s)	Qualifications/Experience for the Posts	Test Specification	Topics of Syllabi
10.	38/2022	Website Manager (BS-17), Federal Public Service Commission.	Second Class or Grade 'C' Master's Degree in Computer Science or Information Technology or equivalent qualification from a University recognized by the HEC. OR Second Class or Grade 'C' Bachelor's Degree (4 years duration) degree of BCS or BS (IT) or BS (CS) or equivalent qualification from a University recognized by HEC. OR Second Class or Grade 'C' Bachelor's Degree in Software Engineering or Computer Engineering or Computer System Engineering or equivalent qualification from a University recognized by the HEC with registration from Pakistan Engineering Council.	Objective Type Test (MCQ) Part-I English =20 marks Part-II Professional Test =80 marks	Part-I Vocabulary, Grammar usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Introduction to Web, • Web Architecture, • Multiple Browsers, • Search Engine Optimization, • Graphic Elements, • Page Styles and Layouts, • Web Server Functionality, • Configuring a Web Server, • Relational Databases and Web, • Java Script for Web development, • Multimedia and Web, • Fundamentals of XML and XHTML, • Search and downloading of information and required data.
11.	39/2022	Assistant Network Administrator (BS-16), Federal Public Service Commission.	Second Class or Grade 'C' Bachelor's Degree in Computer Science or Information Technology or equivalent qualification from a University recognized by the HEC.	Objective Type Test (MCQ) Part-I English = 20 marks Part-II Professional Test=80 marks	Part-I Grammar usage, Sentence Structuring. Part-II <ul style="list-style-type: none"> • Types of networks (LAN, WAN, Internet, Intranet etc.) • Network Topologies, • Network Management • Communication Protocols • OSI model • Operating Systems (Windows, Linux) • Transmission Mediums, Direction and Modes • Network Devices (Switch, Routers, and Modem), • Network security issues (Viruses, Firewall and unauthorized access),

Schemes and Syllabi for Written Examination (Descriptive) for All Posts in BS-18 & BS-19 included in Consolidated Advertisement No. 02/2022

PAPER-I: ENGLISH

Max Marks: 100

Time Allowed: 3 Hours

- (i) **English Essay-50 Marks:** Candidates will be required to write an Essay in English comprising **1500 words** from a set of **six given topics**. Candidates are expected to reflect comprehensive and research based knowledge on a selected topic. Candidate's articulation, expression and technical approach to the style of English Essay writing will be examined.
- (ii) **English (Composition and Précis)-50 Marks:**
The examination will test the candidate's abilities to handle Précis Writing, Reading Comprehension, Sentence Structuring, Translation, Grammar and Vocabulary, etc.
- Précis Writing (10 marks):** A selected passage with an orientation of generic understanding and enough flexibility for compression shall be given for précising and suggesting an appropriate title.
- Reading Comprehension (10 marks):** A selected passage that is rich in substance but not very technical or discipline-specific shall be given, followed by five questions, each carrying 2 marks.
- Grammar and Vocabulary (10 marks):** Correct usage of Tense, Articles, Prepositions, Conjunctions, Punctuation, Phrasal Verbs, Synonyms and Antonyms etc.
- Sentence Correction (5 marks):** Ten sentences shall be given each having a clear structural flaw in terms of grammar or punctuation. The candidates shall be asked to rewrite them with really needed correction only, without marking unnecessary alterations. No two or more sentences should have exactly the same problem, and 2-3 sentences shall be based on correction of punctuation marks.
- Grouping of Words (5 marks):** A random list of ten words of moderate standard (neither very easy nor utterly unfamiliar) shall be given, to be grouped by the candidates in pairs of those having similar or opposite meaning, as may be clearly directed in the question.
- Pairs of Words (5 marks):** Five pairs shall be given of seemingly similar words with different meanings, generally confused in communication, for bringing out the difference in meaning of any five of them by first explaining them in parenthesis and then using them in sentences.
- Translation (5 marks):** Ten short Urdu sentences involving structural composition, significant terms and figurative/idiomatic expressions shall be given, to be accurately translated in English.

SUGGESTED READINGS

Sr. No.	Title	Author
1.	English Grammar in Use	Raymond Murphy (Cambridge University Press)
2.	Practical English Usage	M. Swan (Oxford University Press)
3.	The Little, Brown Handbook	H. Ramsey Flower & Jane Aaron (The Little, Brown & Co; Harper Collins)
4.	A University English Grammar	R. Quirk & S. Greenbaum (ELBS; Longmans)
5.	Write Better, Speak Better	Readers Digest Association
6.	Modern English in Action	Henry Christ (D.C. Heath & Co.)
7.	Exploring the World of English	Syed Saadat Ali Shah

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-30/2022-R
Particulars of post	Senior Store Officer (BS-18), M.E.S, Ministry of Defence (Defence Division).
Minimum Qualification & Experience:	i. Second Class or Grade 'C' M.A/ B.Sc. (Civil Engineering) / M.Com from a recognized University. ii. Five (5) years post qualification experience in the field of Stores handling in BPS-17 or equivalent.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: 50 Marks (Descriptive)

(Public Administration, Office Management & Professional)

- I. **Public Administration:** Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;
- II. **Administrative Accountability:** Internal and External Controls; Executive Control, Legislative Control, Judicial Control, Ombudsman, Public Opinion and Pressure Groups; Problems of Administrative Accountability in Pakistan;
- III. **Planning:** Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan;
- IV. PPRA Ordinance 2002 and Rules 2004.
- V. Procedures for Receipt and Issue of Stores
- VI. Stores procedures with relation to following topics:-
 - Stock Taking
 - Care and Preservation of Military Stores
- VII. Ware House Management

Part-III: 25 Marks (Descriptive)

(Human Resource, Financial Management and Quality Management)

I. Human Resource and Financial Management

Definition, Significance and Scope of Human Resource Management; Organization—Types of Organization, Theory of Organization, Principles of Organization, Organization of the Federal and Provincial Governments, Public Sector Enterprises; Approaches to Human Resource Management. Personnel Administration—Tools of Personnel Management: Selection, Training, Promotion, Compensation, Discipline; Communication, Communication Channels and Principles of Public Relations; Human Behaviour and Organizations Administration.—Elements of Financial Administration, Performance Programmed Budgeting, Capital Budget, Principles of Budgeting, Auditing and Accounting.

II. Basic Concept of Quality Management

ISO-9000, ISO-13000, other certifications regarding quality measurement; management, management for Results, Setting Performance Goals and Targets; Job Analysis: Job Description, Job Specification, Performance Evaluation;

SUGGESTED READINGS

S. No.	Title	Author
1.	An Introduction to the Public Administration	E.N. Cladden
2.	Public Administration for a Welfare State	Paul Ableby
3.	The Bureaucracy of Pakistan	Charles F. Kennedy
4.	Human Resource Management	H.T.Graham & Roger Bennett
5.	Management	James A.F.Stoner, R.Eward Freeman, Daniel R.Gilbert Jr.

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-32/2022-R
Particulars of post	Deputy Engineering Adviser (Power)/ Government Inspector of Electricity (BS-19), Office of Chief Engineering Adviser/ Chairman Federal Flood Commission, Ministry of Water Resources.
Minimum Qualification & Experience:	i. Bachelor's degree in Electrical Engineering or an equivalent qualification from a recognized University/ Institution. ii. Twelve (12) years post qualification experience in Planning, Design or Operation of Hydroelectric or Thermal Power Stations or High Voltage Transmission Systems, or distribution systems in BS-17 and above or equivalent in a Government/ Semi-Government/ reputable private organization.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II.

Part-II (Engineering) (Descriptive) : 75 Marks**I. Electricity & Electronics:**

Electricity & Magnetism; Electrical potential, Resistance, Laws of resistance, Conductance, Conductivity, Impedance, Ohm law, Resistance in series and in parallel, practical resistors, work, power, Energy, Joule's law of electric field intensity, Gauss's Theorem, Capacitor, Capacitance, Capacitors in parallel and series. Force on a conductor in a magnetic field, electrical and magnetic circuits, leakage flux, Relation between magnetism and electricity, Induced emf, induced current and directions, Faraday's laws of electromagnetic inductions, Lenz's law, dynamically induced emf, Self inductance, mutual inductance and inductance in series/parallel, magnetic hysteresis, Energy stored in magnetic field, Generation of alternating currents and voltages.

II. Electrical Machines:

DC Motors: Shunt, Series and Compound Motors, Speed and Torque Relations. Transformers: Principle, Construction, Voltage transformation ratio, Step-up/stepdown transformers, Copper & Iron Losses, Transformer connections; delta and star.

AC Motors: Induction motor, Synchronous motor, Performance, Efficiency. Single phase and three phase Motors.

Generators: Principle, Construction, Different components of generators. AC Generators, DC Generators.

III. Power Systems:

Power network analysis, Polyphase circuits, Transients, Transmission Lines, Losses.

IV. Costing, Accounting and Budgeting:

Net present value, Net future value, cash flows, auditing, income statement, balance sheet, taxation, financial risk management, cost analysis.

V. Project Management:

Time lines, milestones, resources allocation, dependency, Gant Charts,

VI. Inventory Management:

FIFO models, LIFI models, Identification Schemes, Inventory management systems.

VII. Quality Management Systems:

QA models. Deming, Juran Crosby, Quality circles, management responsibility, quality planning, purchasing, design process and design validation, quality audit, corrective and preventive measures.

SUGGESTED READINGS

S. No.	Title	Author
1.	Electrical Technology	B.L. Tharaja
2.	Electronic Devices and Circuits.	Bogart
3.	DC Machines	P.C. Sen
4.	Handbook of Engineering Management	Dennis Lock.
5.	Total Quality Management	Dale H. Besterfield, Carol Besterfield-Michna, Glen H. Besterfield, Mary Gesterfield-Sacre

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-34/2022-R
Particulars of post	Director (BS-19), Federal Public Service Commission.
Minimum Qualification & Experience:	i. Second Class or Grade 'C' Master's Degree or equivalent qualification from a University recognized by HEC. ii. Twelve (12) years post qualification experience in BS-17 and above or equivalent in Govt./ Semi-Govt./ Autonomous bodies or an Organization of repute in the field of Public Administration/ Establishment/ Human Resource Management/ Financial Management/ Selection of Personnel.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: 50 Marks (Descriptive)

(Public Administration, Office Management & Professional)

- I. **Public Administration:** Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;
- II. **Bureaucracy:** Concept of Bureaucracy, Bureaucracy of Pakistan as a Change Agent;
- III. **Administrative Accountability:** Internal and External Controls; Executive Control, Legislative Control, Judicial Control, Ombudsman, Public Opinion and Pressure Groups; Problems of Administrative Accountability in Pakistan;
- IV. **Planning:** Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan;
- V. FPSC Ordinance 1977;
- VI. The Civil Service of Pakistan: Structure, Role of Civil Service in Good Governance;
- VII. PPRA Ordinance 2002 and Rules 2004.
- VIII. HR Recruitment Procedure & Evaluation/Assessment Mechanism.

Part-III: 25 Marks (Descriptive)

(Human Resource, Financial Management and Quality Management)

I. Human Resource and Financial Management

Definition, Significance and Scope of Human Resource Management; Organization—Types of Organization, Theory of Organization, Principles of Organization, Organization of the Federal and Provincial Governments, Public Sector Enterprises; Approaches to Human Resource Management. Personnel Administration—Tools of Personnel Management: Selection, Training, Promotion, Compensation, Discipline; Communication, Communication Channels and Principles of Public Relations; Human Behaviour and Organizations Administration.—Elements of Financial Administration, Performance Programmed Budgeting, Capital Budget, Principles of Budgeting, Auditing and Accounting.

II. Basic Concept of Quality Management

ISO-9000, ISO-13000, other certifications regarding quality measurement; management, management for Results, Setting Performance Goals and Targets; Job Analysis: Job Description, Job Specification, Performance Evaluation;

SUGGESTED READINGS

S. No.	Title	Author
1.	An Introduction to the Public Administration	E.N. Cladden
2.	Bureaucracy: Modern Society	Pebr, M. Blau.
3.	Public Administration for a Welfare State	Paul Ableby
4.	The Bureaucracy of Pakistan	Charles F. Kennedy
5.	Human Resource Management	H.T.Graham & Roger Bennett
6.	Management	James A.F.Stoner, R.Eward Freeman, Daniel R.Gilbert Jr.

PAPER-II: PROFESSIONAL**Max Marks: 100****Time Allowed: 3 Hours**

Case No.	F.4-35/2022-R
Particulars of post	Deputy Director (BS-18) , Federal Public Service Commission,
Minimum Qualification & Experience:	i. Second Class or Grade 'C' Master's Degree or equivalent qualification from a University recognized by HEC. ii. Five (5) years post qualification experience in BS-17 or equivalent in Govt./Semi Government/ Autonomous Bodies or an Organization of repute in the field of Public Administration/ Establishment/ Human Resource Management/ Financial Management/ Selection of Personnel.

Part-I: 25 Marks (MCQ)

- 25 MCQ Questions on Part-II & III.

Part-II: 50 Marks (Descriptive)

(Public Administration, Office Management & Professional)

- I. **Public Administration:** Nature and scope, Role of Public Administration in a modern Welfare State; Issues & Challenges of Public Administration in Pakistan;
- II. **Bureaucracy:** Concept of Bureaucracy, Bureaucracy of Pakistan as a Change Agent;
- III. **Administrative Accountability:** Internal and External Controls; Executive Control, Legislative Control, Judicial Control, Ombudsman, Public Opinion and Pressure Groups; Problems of Administrative Accountability in Pakistan;
- IV. **Planning:** Types of Plans, Planning Process; Principles of Planning, Planning Machinery in Pakistan;
- V. FPSC Ordinance 1977;
- VI. The Civil Service of Pakistan: Structure, Role of Civil Service in Good Governance;
- VII. PPRA Ordinance 2002 and Rules 2004.
- VIII. HR Recruitment Procedure & Evaluation/Assessment Mechanism.

Part-III: 25 Marks (Descriptive)

(Human Resource, Financial Management and Quality Management)

I. Human Resource and Financial Management

Definition, Significance and Scope of Human Resource Management; Organization—Types of Organization, Theory of Organization, Principles of Organization, Organization of the Federal and Provincial Governments, Public Sector Enterprises; Approaches to Human Resource Management. Personnel Administration—Tools of Personnel Management: Selection, Training, Promotion, Compensation, Discipline; Communication, Communication Channels and Principles of Public Relations; Human Behaviour and Organizations Administration.—Elements of Financial Administration, Performance Programmed Budgeting, Capital Budget, Principles of Budgeting, Auditing and Accounting.

II. Basic Concept of Quality Management

ISO-9000, ISO-13000, other certifications regarding quality measurement; management, management for Results, Setting Performance Goals and Targets; Job Analysis: Job Description, Job Specification, Performance Evaluation;

SUGGESTED READINGS

S. No.	Title	Author
1.	An Introduction to the Public Administration	E.N. Cladden
2.	Bureaucracy: Modern Society	Pebr, M. Blau.
3.	Public Administration for a Welfare State	Paul Ableby
4.	The Bureaucracy of Pakistan	Charles F. Kennedy
5.	Human Resource Management	H.T.Graham & Roger Bennett
6.	Management	James A.F.Stoner, R.Eward Freeman, Daniel R.Gilbert Jr.